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Columbus, Ohio

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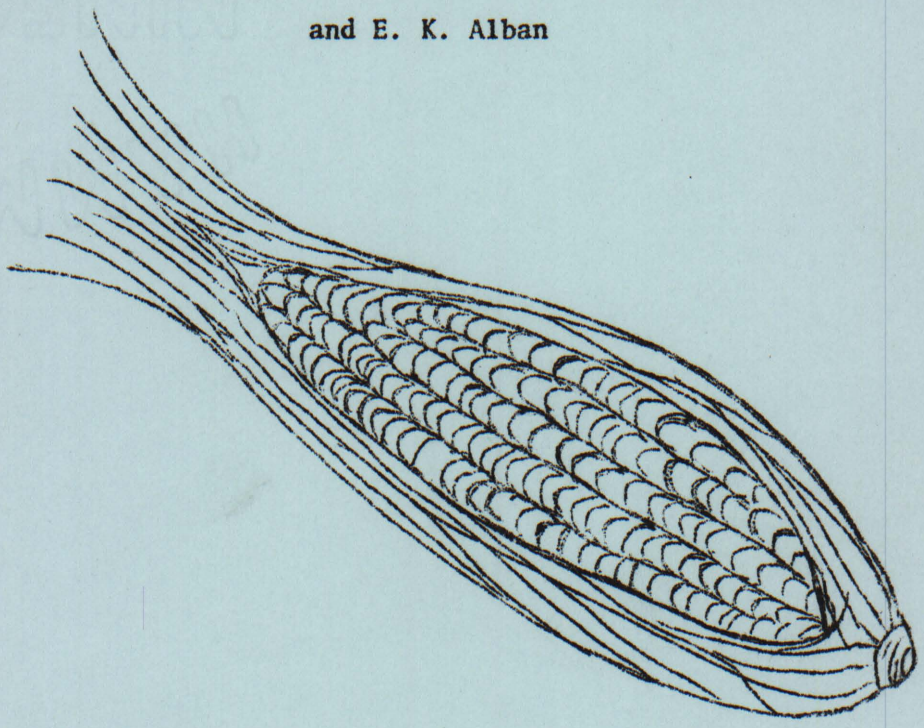

DEPARTMENT OF HORTICULTURE

OHIO AGRICULTURAL RESEARCH AND DEVELOPMENT CENTER

WOOSTER, OHIO

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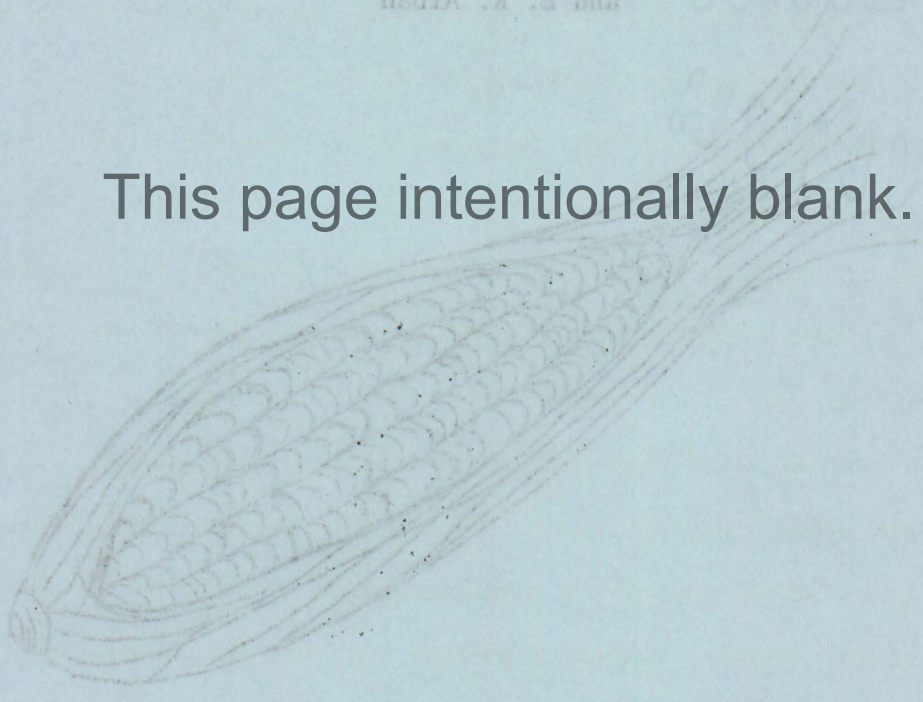

1976 Evaluation of Sweet Corn Cultivars

Columbus, Ohio

William M. Brooks[1], James D. Utzinger[1], William L. George, Jr.[1], E. K. Alban[1], Gerald G. Myers[1] and Alvin R. Mosley[2]

The 1976 sweet corn cultivar trials at The Ohio State University Horticultural Farm, 1000 West Lane Avenue, Columbus, consisted of twenty-eight cultivars which were replicated four times and thirty-one cultivars in non-replicated, single plots.

Corn was seeded on May 10, 1976 in 36" rows with hills spaced 18" apart. Single row plots of 21 hills were 31.5' long. Blocks and tiers of plots were separated by a distance of six feet. Guard rows were planted to the east and west sides of rows running north and south with guard hills across the north and south ends of the entire planting. In addition to the other guard rows, 4 rows of an early maturing and a late maturing cultivar were planted on both the east and west sides of the entire planting of plots to enhance pollination. All plots were planted by hand jabber with 4 kernels per hill. Plants were thinned to 2 plants per hill at the 2 to 3 leaf stage.

Prior to plowing, 12-12-12 fertilizer was applied broadcast at the rate of 1000 pounds per acre. There was also 250 pounds 6-24-12 placed 2 inches to the side and 2 inches below the seed at planting time. No additional fertilizer was applied during the season. Ramrod herbicide was applied, immediately after planting, at 5 pounds active ingredient per acre and watered in with sprinkler irrigation. No insecticides or fungicides were applied after planting. Most lots of seed had been treated with a fungicide and/or an insecticide. Irrigation was used throughout the season as needed.

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The following information on temperature and rainfall was obtained from the official records of the United States Weather Bureau at the Port Columbus International Airport.

Weather Data

Month	Average Temperature (°F)	Total Rainfall (inches)	Above or Below Normal (inches)
April	50.9	1.44	-2.27
May	58.1	1.41	-2.69
June	70.5	4.52	0.39
July	72.0	5.12	0.91
August	68.3	5.08	2.22

Listed below are the seed companies which generously supplied the seed for these trials without charge:

Code	Company
A-1	Agway, Inc., Buffalo, N.Y. 14240
A-2	Asgrow Seed Co., Kalamazoo, MI 49001
F-2	Ferry-Morse Seed Co., Mountain View, CA 94042
H-1	Joseph Harris Co., Rochester, N.Y. 14624
N-1	Northrup-King & Co., Minneapolis, MN 55413
N-2	F.M.C. Corp., A.D.C., Modesta, CA 95618
R-1	Robson Seed Farms Corp., Hall, N.Y. 14463
R-2	Rogers Brothers Co., Idaho Falls, ID 83401
T-1	Otis S. Twilley Seed Co., Salisbury, MD 21801

The first harvest was made on July 22 and the last harvest was made on August 13. Sprite, RXP-193 and NCX-2010, were all harvested on the first day of harvest. The highest yielding cultivars in the replicated plots (Table 1) based on dozens of marketable ears harvested per acre were Gold Cup, Aztec, Sugar Loaf, Apache and Earlibelle, with over 1600 dozen ears per acre.

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The marketable ears harvested from Gold Cup were significantly greater than those harvested from Merit, but not significantly greater than ears harvested from the cultivars Aztec, Sugar Loaf, Apache and Earlibelle. The cultivar, Apache, was the only variety that had 90 percent or more of their yield marketable. Bonanza, Merit and Hallmark had the heaviest husked ears in the replicated trials and Bonanza had the longest husked ears. Merit and Hallmark had husked ears with the greatest diameter. Resister, Merit and Sugar Loaf were the highest yielding cultivars based on tons of unhusked ears of marketable corn.

Gold Crown in the non-replicated plots (Table 2) produced at the rate of over 2000 dozen marketable ears per acre. This cultivar has consistently produced high yields in previous variety trials in Columbus.

Corn Rust was evident on all cultivars in the trial. However, since the symptoms were evident on all cultivars at the same time, later maturing varieties were probably affected more than earlier maturing cultivars. MDM (Maize Dwarf Mosaic) symptoms were not evident in the plots but was probably present.

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Special thanks and appreciation is expressed to Jerry L. Robertson, Department of Horticulture, The Ohio State University, for his assistance in statistically analyzing the data.

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Table 1 - Replicated trial: Yield and other characteristics of sweet corn cultivars

Variety, Source and* Lot Number	Days to First Harvest	Marketable yield/A			Average wt. of mkt. ears unhusked (lbs.)	Average length of ears husked (in.)	Average diameter of ears husked (in.)	Ear Worms %	Ear Smut %	Bird Damage
		Dozens of ears	Wt. (tons)	percent						
RXP-193, R-2, 1575	73	856	2.43	63	.47	6.4	1.4	0	8.0	0
Earlibelle, H-1, 110-756F	75	1,627	5.22	81	.53	7.6	1.7	0	1.0	2.0
Aztec, A-2, 93601-2F40	77	1,696	5.69	85	.56	7.4	1.7	2.0	1.0	.5
Spring Gold, H-1, 137-754T	77	1,262	3.50	76	.46	6.4	1.7	0	.8	1.6
Beacon, R-2, 58001	77	1,206	4.29	76	.59	7.3	1.7	0	12.0	0
Sunchief, A-1, V873C	79	1,552	6.75	88	.73	7.9	1.8	.7	2.0	0
Reliance, N-1, 36828-10201	79	1,123	3.69	74	.55	8.0	1.7	7.0	.8	.8
Fanfare, R-2, 58011	81	1,224	4.74	72	.66	8.3	1.7	2.0	6.0	.8
E-4230, F-2, 90600-131115	81	1,198	4.30	86	.60	7.3	1.6	0	0	2.5
Gold Cup, H-1, 118-770F17	85	1,839	6.38	86	.58	7.9	1.6	0	0	0
Sugar Loaf, N-1, 37031-3516C	87	1,632	7.23	39	.62	8.0	1.8	0	1.0	1.0
Apache, A-2, 33518-F40	87	1,629	6.62	93	.68	7.8	1.7	0	0	0
Comet, A-2, 73605-F40	87	1,527	5.65	83	.62	8.6	1.6	.6	0	.6
Bellringer, H-1, 102-827-185	87	1,381	5.71	88	.69	7.3	1.7	0	0	0
Bonanza, F-2, 90609-13226F	87	1,277	6.49	83	.85	8.7	1.8	1.5	0	0
Eastern Belle, A-1, V712C	87	1,248	4.41	73	.59	7.7	1.5	2.0	9.0	2.0
70-2070, R-2, 38108	87	1,056	3.89	74	.61	8.1	1.8	2.0	1.0	1.0
Sugar Dots, F-2, 90600-13193	87	759	2.32	74	.51	7.0	1.9	0	1.0	0
Seneca Scout, H-1, 138-3688MF	90	1,462	5.93	77	.68	7.7	1.8	.7	2.0	0
White Delight, T-1, B7	90	1,306	5.13	65	.66	8.3	1.6	0	5.4	0
NK-199, N-1, 37177-18610	90	1,059	4.11	71	.64	7.2	1.8	4.0	2.0	0
Salute, A-2	90	855	3.28	76	.64	7.3	1.6	7.0	0	0
Resister, N-2, 43203-5973	91	1,558	7.33	85	.78	8.4	1.9	2.5	0	2.0
Merit, A-2, 93629-1-F40	91	1,454	7.32	80	.84	8.3	2.0	3.0	2.0	1.0
Hallmark, N-1, 36830-10101	91	1,344	6.54	87	.81	8.4	2.0	.6	0	0
Epic (NCX-2004), N-2, 43202-5972	93	1,306	5.59	82	.71	7.9	1.8	2.0	.7	1.4
Sweet Sue, H-1, 143-847F16	93	1,115	3.96	85	.59	7.6	1.6	0	.8	0
Silver Queen, R-2, 58076	95	1,432	5.51	80	.64	7.7	1.6	0	.7	0
HSD 5%		383	1.81							

*Cultivars ranked according to days to first harvest (lowest first) and dozens of marketable ears per acre (highest listed first within maturity).

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Table 2 - Non-replicated observation plots: Yield and other characteristics of sweet corn cultivars

Variety, Source and* Lot Number	Days to First Harvest	Marketable yield/A			Average wt. of mkt. ears unhusked (lbs.)	Average length of ears husked (in.)	Average diameter of ears husked (in.)	Ear Worms %	Ear Smut %	Bird Damage
		Dozens of ears	Wt. (tons)	percent						
Sprite, H-1, 142-853T	73	1,767	5.02	87	.47	6.6	1.6	0	2.0	0
NCX-2010, N-2, 71261	73	1,306	3.41	79	.44	6.7	1.5	0	3.0	0
Harmony, H-1, 12J-757F17	75	1,448	5.92	86	.68	7.2	1.8	0	6.0	0
NCX-2015, N-2, 71269	75	999	3.66	70	.61	7.0	1.9	0	0	0
Butter Corn, A-1, V870	78	1,041	3.43	65	.55	6.8	1.8	0	9.0	0
NCX-2012, N-2, 71271	79	1,613	6.08	72	.63	7.9	1.7	0	2.0	0
NCX-2016, N-2, 71267	79	1,536	5.28	92	.57	7.5	1.7	0	2.5	0
69-1656, R-2, 48052	79	1,498	5.99	83	.67	8.1	1.8	0	3.0	0
Sundance, H-1, 141-750T	79	1,498	5.64	82	.63	7.3	1.8	0	0	0
68-1974, R-2, 58098	79	1,486	5.94	78	.67	8.2	1.7	0	2.0	5.0
Butter & Sugar, A-1, V871	79	999	2.93	50	.49	7.3	1.7	0	0	4.0
XP-1331, A-2, 93651-F40	80	1,536	5.97	85	.65	8.3	1.5	0	0	0
Pageant, R-2, 58108	81	1,686	6.66	80	.66	8.1	1.8	5.0	2.0	0
E-4231, F-2, 90600-13119C	81	1,498	5.48	82	.61	8.3	1.7	0	0	0
Rapidpak, F-2, 90400-13109	81	1,075	3.78	68	.59	8.0	1.6	0	0	0
Gold Crown, H-1, 117-843F17	85	2,170	9.93	87	.76	9.1	1.7	0	4.0	0
E-4219, F-2, 11550-13102	85	1,613	6.41	92	.66	8.2	1.6	0	0	2.0
Winter Market 86, F-2, 90402-13104	85	1,536	5.88	92	.64	8.6	1.6	2.5	0	0
Gold Winter, H-1, 119-837F17	85	1,287	4.93	80	.64	8.0	1.7	0	0	0
E-4229,F-2, 44429F	87	1,421	5.05	80	.59	7.7	1.6	0	0	0
Seneca Chief, R-1, 1324MED	87	1,406	5.18	88	.61	8.3	1.6	3.0	3.0	0
Jubilee, R-2, 58020	87	1,083	4.72	77	.73	8.2	1.7	0	3.0	0
70-2428, R-2, 18131	87	745	2.95	66	.66	8.7	1.7	12.0	6.0	0
70-2367, R-2, 48057	91	883	3.23	68	.61	8.3	1.6	4.0	0	4.0
Capitan, A-2, 93604-F40	93	1,686	8.27	88	.82	8.7	1.8	0	0	0
RXP-223, R-1, 4064-3T	93	1,613	6.84	78	.71	7.6	1.8	0	5.0	0
Tendersweet, A-2, 33519-F40	93	1,133	5.07	78	.75	8.4	1.7	12.0	0	0
Commander, A-2, 93607-F40	93	1,075	4.29	63	.66	8.7	1.9	14.0	7.0	0
RXP-201, R-1, 4095-T	93	845	2.81	71	.55	7.4	1.6	0	0	0
74-3045, R-2, 58109	93	615	2.03	59	.55	7.8	1.8	31.0	6.0	0
Silver Queen, H-1, 134-406MR	97	922	3.64	59	.65	7.6	1.4	0	0	0

*Cultivars ranked according to days to first harvest (lowest first) and dozens of marketable ears per acre (highest listed first within maturity).

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